## REMARKS

Claims 1 and 9 have been amended by this Amendment C. Claims 1-10 are now pending in the application. Allowance of the pending claims is earnestly requested. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attachment is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE." Applicants thank the Examiner for extending the undersigned the courtesy of a telephone interview, which was conducted on May 14, 2002. The substance of that interview is included in the following remarks.

Claims 1 and 9 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In particular, the Examiner contends that applicants' use of the word "predetermined" renders those claims indefinite. Although applicants disagree with the Examiner, applicants have offered to amend claims 1 and 9 in order to expedite the prosecution of the application.

Claims 1-6 and 9-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cope (U.S. Patent No. 3,761,692). Claims 7 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Cope patent, in view of Araki et al. (U.S. Patent No. 5,089,238).

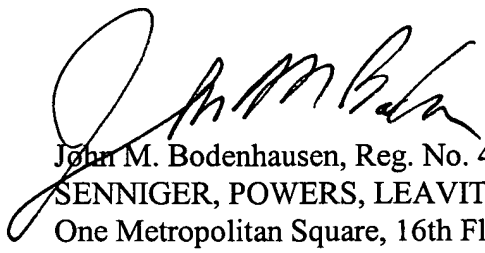
On April 19, applicants filed an Amendment B in response to the Final Office action mailed February 20, 2002. In an Advisory action dated April 29, 2002, the Examiner indicated that he refused to enter Amendment B. In response to the Advisory action, the undersigned arranged the above-referenced telephone interview, at which time the Examiner agreed that the amendments to claims 1 and 9 presented in Amendment B resolved the rejection of those claims under 35 U.S.C. § 112, second paragraph. No agreement was reached with respect to resolving the rejection of the pending claims on the basis of 35 U.S.C. § 103(a).

The amendments to claims 1 and 9 in the present Amendment C are identical to amendments to those claims presented in Amendment B, which the Examiner agreed would resolve the rejection under section 112, second paragraph. Accordingly, applicants respectfully request entry of this Amendment C as it presents the rejected claims in better form for consideration on appeal. In particular, entry of the present Amendment C eliminates the need to address on appeal the rejection of the claims under 35 U.S.C. § 112. A Notice of Appeal is being filed concurrently herewith.

The Examiner is invited to contact the undersigned, should the Examiner believe that another telephone interview would further expedite the prosecution of the application.

The Commissioner is hereby authorized to charge any fees that may be required during the entire pendency of this application to Deposit Account No. 19-1345.

Respectfully submitted,



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VERSION WITH MARKINGS SHOWING CHANGES MADE

**IN THE CLAIMS**

Claims 1 and 9 have been amended as follows:

1 (twice amended). A method for use in combination with a crystal growing apparatus for growing a monocrystalline ingot according to the Czochralski process, said crystal growing apparatus having a heated crucible containing a semiconductor melt from which the ingot is grown, said ingot being grown on a seed crystal pulled from the melt, said method comprising the steps of:

defining a temperature model representative of variations in the temperature of the melt in response to variations in power supplied to a heater for heating the melt;

pulling the ingot from the melt at a target pull rate, said target pull rate substantially following a [predetermined] velocity profile, said velocity profile stored in memory and defining the target pull rate;

generating a signal representative of an error between a target diameter of the ingot and a measured diameter of the ingot;

performing proportional-integral-derivative (PID) control on the error signal and generating a temperature set point as a function thereof, said temperature set point representing a target temperature of the melt;

determining a power set point for the power supplied to the heater from the temperature model as a function of the temperature set point generated by the PID control; and

adjusting the power supplied to the heater according to the power set point thereby changing the temperature of the melt to control the diameter of the ingot.

9 (amended). The method of claim 1 further comprising the step of varying the rate at which the ingot is pulled from the melt to control diameter of the ingot, said step of varying the pull rate occurring during growth of a first portion of the ingot and said step of pulling the ingot at the target pull rate substantially following the [predetermined] velocity profile occurring during growth of a second portion of the ingot.